

Interview Summary	Application No.	Applicant(s)
	10/815,759	SAKAS ET AL.
	Examiner Eleni Mantis Mercader	Art Unit 3768

All participants (applicant, applicant's representative, PTO personnel):

(1) Eleni Mantis Mercader. (3) Richard Neifeld (Reg. No. 36,299)
 (2) Amanda Lauritzen. (4) _____

Date of Interview: 21 March 2007.

Type: a) Telephonic b) Video Conference
 c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
 If Yes, brief description: _____

Claim(s) discussed: 1 of the newly proposed claims.

Identification of prior art discussed: Schneider US Patent 6,351,573

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiners disagree that the limitations of spatial dimension & orientation are not met w/ the primary reference of Schneider. Examiners pointed out that the "scale of pixels" ^{is} not claimed and "spatial dimension" is overbroad.

*G. Janzen
Glen M. Janzen*

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

APPLICATION: 10/815,759 FILED 4/2/2004. CONTROL NO: 9961

INVENTOR: SAKAS

NEIFELD REF: EFFE0010UEP-US

EXAMINER: LAURITZEN, AMANDA L./ART UNIT 3727

FAX NUMBER: 1-571-273-4303

EXAMINER TELEPHONE NUMBER: 571-272-4303

FROM: RICHARD NEIFELD, ATTORNEY OF RECORD

PROPOSAL FOR DISCUSSION AT A PERSONAL INTERVIEW

REVISED INTERVIEW DATE AND TIME; LOCATION; AND ATTENDEES:

WEDNESDAY 3/21/2007; 3:30 PM; RANDOLPH, 6TH FLOOR, 3:30 PM, WITH EX.

AMANDA LAURITZEN AND SPE ELENI MANTIS-MERCADER

Agenda

1. Review prior art and disclosed invention
2. Identify features of disclosed invention not disclosed in the prior art
3. Review/review proposed draft claims.

BACKGROUND

Schneider discloses methods of registering image data sets based upon identifying in each image absolute location (relative to a reference location) of the same marker feature (what Schneider calls a fiducial mark) in order to register the orientation of images obtained using different imaging detectors.

In contrast, this application discloses maintaining orientation and relative scale of display of images obtained using different imaging detectors (US and one other, such as CT) by using certain non image data associated with the US image data set. The certain non image data is defined in the specification as "geometry data," and it includes:

spatial dimension of an image unit, such as a pixel, used for image data;
or spatial dimension of the image unit, in combination with distance in image units between fiducial markers *in an image*;
or *orientation of a direction in the image* relative to orientation of the ultrasound detector.
The following new claims distinguish over Schneider by the limitations relating to use of

geometry data to determine from the second image data images that have specified scale or orientation based upon the geometry data obtained from an US image detector system.

PROPOSED NEW CLAIMS

Support in the specification for each limitation appears in parenthesis.

1. (New) A method for displaying in an image combination device images of an object, comprising:

storing second image data detected using a second imaging system, and from which second images can be generated, in a data storage structure; (page 8, line 19)

transferring geometry data from an ultrasound imaging detector system to said image combination device, wherein said geometry data and first image data are obtained using said ultrasound imaging detector system; (Page 5 lines a-d)

generating, in said image combination device, using said geometry data and said second image data, said second images, wherein said image combination device uses said geometry data to determine from said second image data at least one of orientation and scale of said second images; (Page 2, 2nd is to 5th paragraph and Page 4 inclusive.)

wherein said geometry data comprises at least one of the following: (Page 5 lines a-d)

(a) spatial dimension of an image unit of said first image data; and (page 5 item a)

(d) orientation of at least one direction relative to orientation of said ultrasound imaging detector. (page 5 item c)

2. (New) The method of claim 1 further comprising storing said geometry data in a data storage structure.

3. (New) The method of claim 1 wherein said geometry data further comprises at least one of the following: (Page 5 lines a-d)

(b) number of image units between two features in said first image data; and (page 5 item b)

(c) number of image units between a feature in said first image and said ultrasound imaging detector; and (page 5 item b)

4. The method of claim 1 wherein said geometry data comprises both (a) and (d).

5. The method of claim 1 wherein said image unit is a pixel.

6. The method of claim 1 further comprising transferring said first image data from said ultrasound imaging detector of said ultrasound imaging detector system to said image combination device; and

generating, in said image combination device, first images using said geometry data and said first image data, wherein said image combination device uses said geometry data to determine from said second image data second images that maintain constant at least one of said relative orientation and said ratio of scale, relative to concurrently displayed first images; (Page 2, 2nd is to 5th paragraph and Page 4 inclusive.)

7. The method of claim 6 wherein said image combination device uses said geometry data to determine from said second image data second images that maintain constant both relative orientation and ratio of scale, relative to concurrently displayed first images.

8. The method of claim 1 further comprising transferring from said ultrasound imaging detector system to said image combination device data indicating position of said ultrasound imaging detector relative to a position sensor. (page 5 lines 22-24)

9. The method of claim 1 further comprising transferring from said ultrasound imaging detector system to said image combination device data indicating identification of an ultrasound probe of said ultrasound imaging detector system. (page 5 lines 25-30)

10. The method of claim 1 further comprising a user selecting a spatial dimension within a range of spatial dimensions of said ultrasound imaging detector. (page 6 lines 5-10).

11. The method of claim 1 further comprising a user operating a control element thereby adjusting a pixel size provided by said ultrasound imaging detector system. (page 6 lines 5-10).

12. The method of claim 1 further comprising a user operating a control element thereby changing orientation of at least one of said first images provided by said image combination device.

13. The method of claim 1 further comprising transferring from said ultrasound imaging detector system to said image combination device repetition frequency of generation of first images. (Page 7 line 3)

14. The method of claim 1 wherein said ultrasound imaging detector system further comprises a control unit for controlling said ultrasound imaging detector. (Page 7 lines 6-8)

15. The method of claim 1 further comprising limiting a time for detection of ultrasound echo signals by said ultrasound imaging detector using a control unit of said ultrasound imaging detector system, thereby selecting a penetration depth for said first image data. (page 7 lines 6-14)

16. The method of claim 15 further comprising determining said penetration depth, in said ultrasound imaging detector system, and transmitting said penetration depth to said combination device. (page 7 lines 10-12)

17. The method of claim 1 further comprising:
determining, in said ultrasound imaging detector system, a width of an image recording area of a first image; and
transmitting said width to said combination unit. (Page 7 lines 12-14)

18. The method of claim 1 further comprising converting, in said ultrasound imaging detector system, said first image data to first image digital data, and transmitting said first image digital data to said combination device. (page 7 lines 15-18.)

ANALOG SYSTEM CLAIMS

1. (New) A system for displaying in an image combination device images of an object, comprising:

a data storage structure storing second image data detected using a second imaging system, and from which second image data second images can be generated; (page 8, line 19)

a data transfer structure for transferring geometry data from an ultrasound imaging detector system to said image combination device, wherein said geometry data and

first image data are obtained using said ultrasound imaging detector system; (Page 5 lines a-d)

 said image combination device, for generating, using said geometry data and said second image data, said second images, wherein said image combination device uses said geometry data to determine from said second image data at least one of orientation and scale of said second images; (Page 2, 2nd is to 5th paragraph and Page 4 inclusive.)

 wherein said geometry data comprises at least one of the following: (Page 5 lines a-d)

 (a) spatial dimension of an image unit of said first image data; and (page 5 item a)

 (d) orientation of at least one direction relative to orientation of said ultrasound imaging detector. (page 5 item c)

Analog system dependent claims will be added.

RAN

Date/time code: March 16, 2007 (3:29pm)

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